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BACKPACKING
in the
**NATIONAL
FOREST
WILDERNESS . . .**

a family adventure

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BACKPACKING IN THE NATIONAL FOREST WILDERNESS . . . a family adventure

High on a mountain pass in the Bob Marshall Wilderness in Montana the Rupe family paused. Ahead lay Holland Lake and the family car which would take them back to California. Behind lay 12 days of hiking and 88 miles of trail.

It had been a vacation long to be remembered—the 7½ mile climb up the Chinese Wall, a 15-mile escarpment on the Continental Divide which juts 1,000 feet above the eastern slope.

—The horseback rider who, after passing them on the trail, galloped back with a large chocolate bar, and the Forest Service lookout who joined them for a cup of tea.

—Harriet falling in the stream while rock-jumping with her 38-pound pack. (“I felt like Mrs. Ox,” she said in her journal.)

—Nights around the campfire with Jack reading from a paperback or the whole family singing.

—Dinners with 11-year-old Wade preparing the instant pudding, so he could “lap” the spoon.

—The sound of rain on lightweight plastic tents and the cozy warmth of the sleeping bags.

—The ouzel birds hopping along the river and Whiskey Jacks swooping down to nibble Bret’s food.

—Playful chipmunks which Barbara tried to tame, coyotes that howled in the night, and the curious deer that nuzzled into Jackie’s pack.

—Fishing like they’d never had before with 3-pound trout that wouldn’t fit into the frying pan.

—Meeting the Chief of the Forest Service and his boss the Secretary of Agriculture, who were exploring the same wilderness together.

Harriet wrote in her journal:

“We were torn between the desire to get back to civilization, which I reckon means good food and hot baths, and the desire to heed the call of the wilderness and remain in this beautiful secluded area. The temptation for this leisurely carefree way of life is hard to ignore and yet we are forced to return to our workaday worlds—Jack to his jet propulsion laboratory in Pasadena as research engineer and supervisor; Jackie to her first year in college and the Marine she hasn’t seen in three weeks; Bret to his 11th year in school, Explorer Scouts, clarinet lessons, and 4-H work; Barbara to her first year in Junior High and the complete change from Grade School, to her horseback riding lessons and practice for the Pomona Horse Show; Wade to Cub Scouts, 5th grade in school, baseball, and bicycle; and me to the life of a busy housewife, chairman of ways and means activities for the Women’s Club, Den Mother, P-TA, golf and bridge.

“In a short time our adventures in the wilderness will just be a memory, but we are leaving with a strong desire to return again next year.”

F-503163

The Rupe family leaving the campground. Jack points out the route the family will take. Wade, a veteran backpacker, rests while he can.

YOU TOO CAN DO IT

You can break away from the permanent campfire grates and heavy rustic tables of the campground, venture into wilderness country with your home on your back, and know the joys of stopping when and where you will without thought of schedules or definite destinations.

Backpacking offers freedom found in no other type of wilderness travel. No worry about tying up the horse when you pause to brew a cup of tea or dunk in a mountain stream. No wondering if he can pick his way over the rocks or cross the snowfield. No searching for pasture when it is time to make camp or carrying oats to supplement natural feed. No caring for sore or bruised feet other than your own. Self-sufficient, you consider only the whims and comforts of your family.

Wilderness backpacking is not limited to supermen.



It can be a family vacation. The Rupes took their youngsters backpacking as soon as they were old enough to hike and interested enough to want to go. Wade first clamored for inclusion in the family trip instead of staying with relatives when he was 6 years old—and he toted his own pack.

Age Is No Barrier

Another family with four children, ages 5, 7, 8, and 9, hiked 14 miles to a wilderness camp spot in the Bridger National Forest in Wyoming. When the Forest Ranger met the tired youngsters they were grinning from ear to ear, proud that they had packed in their own gear.

In Washington State, 3-year-old Katie hiked 4½ miles into a wilderness in the Wenatchee National Forest where her folks were going to camp a week. It took her 6 hours, not because she got tired, but because she found so many fascinating things to examine on the way.

Hikers in the Mount Hood National Forest in Oregon were surprised when they saw an elderly woman sitting on a light metal folding chair beside a trail. "The others in the family are ahead," she said, "packing in gear for an overnight campout." She was hiking in easy stages, resting when she needed to, and thoroughly enjoying every minute of the trip.

These families have experienced the thrill of wilderness backpacking. The trips were simple ones, but

carefully planned. Some day the children will grow up and the families will go deeper into the wilderness, move every day or two, explore more territory, and try more rugged terrain.

Advanced Camping

Backpacking is best described as advanced camping and should be undertaken only by those who have hiked mountain or forest trails. It requires physical stamina and a genuine liking for the isolation of remote country. The Rupes had hiked often in their California mountains, but as Jack said, "It took us a long time to get up the courage to try backpacking. The one thing that pushed me into it was fishing. I wanted a chance to tie onto those big fish people talked about."

Equipment presented some problems, but the Rupes found that by shopping around and asking a lot of questions, they could get a shelter that was rainproof; a bed that was warm; and food that was nourishing and easy to prepare at a reasonable price. "We've had to leave the best equipment and new gadgets to the purists and those who can afford them. During the 12 years we have been backpacking we have improved our equipment gradually. But we've kept costs down."

Make Trial Run

This manual for backpacking campers is designed for those who want to do it but don't quite know how.

It will tell what the Rupes finally worked out for food and equipment, give other suggestions, and list organizations that might give further information. A manual of this type cannot mention all equipment a family might use, nor can it outline what will best meet the specific needs of every family. It is a general guide.

Only through experience can the backpacker refine equipment and methods. Evenings with how-to-do-it books, browsing through equipment stores, practice in putting up tents or shelters from ground cloths, and trying out dehydrated foods will spark the imagination and eliminate some of the more glaring mistakes.

Nothing, however, will be more valuable than the trial run to tone the muscles and show up mistakes in plans. During a short trip no one will suffer unduly if the master check list is incomplete and some essential has been left at home.



There are countless places to which backpacking families can go. As a starter try an overnight trip to a favorite mountain or fishing stream. Follow an unmarked trail that seems inviting or the abandoned woods road, no longer passable by car.

Within the 154 National Forests in 39 States and Puerto Rico are 182 million acres—all open to backpacking—and over 105,000 miles of trails. The Appalachian Trail winds for 2,000 miles from Mount Katahdin in Maine to Springer Mountain in Georgia. Parts of it pass through National Forests, especially in the Southern Appalachians. In the West the Pacific Crest Trail twists and turns for 2,150 miles through the Cascades and the Sierras from Canada to Mexico. Most of this trail is within 22 National Forests and 5 National Parks.

Short trails lead into the piney woods of the South, through the mixed forests of the Lake States, and onto the treeless western peaks. For many backpackers such back country provides enough challenge; for others it is merely warmup for wilderness.

National Forest Wilderness

The Forest Service, under U.S. Department of Agriculture regulations, set aside wildernesses about 40 years before the National Wilderness Preservation System was established by Congress in 1964.

Within the National Forest wildernesses and primitive areas, which cover 14¼ million acres, there are no roads, no mass recreation developments, and no timber cutting. Areas range from the 5,000-acre Great Gulf in the White Mountain National Forest in New Hampshire to the Selway-Bitterroot Wilderness, which sprawls across 988,655 acres within four National Forests in Idaho and Montana.

They include many types of country, such as the desolate and almost waterless Superstition Mountains in Arizona, replete with colorful legends of the Southwest; the living glaciers of Glacier Peak in Washington; the Salmon River in Idaho; and the jagged Minarets in California.

About 9 million acres of this wilderness resource became the nucleus of the National Wilderness Preservation System, upon passage of the Wilderness Act. The remaining acreage is protected in Primitive Areas until reviewed for possible inclusion in the National Wilderness Preservation System.



WILDERNESSES AND PRIMITIVE AREAS IN THE NATIONAL FORESTS

State	National Forest	Headquarters	Total Acreage
ARIZONA			
Blue Range (also in N. Mex.)	Apache	Springerville	180,139
Chiricahua	Coronado	Tucson	18,000
Galiuro	Coronado	Tucson	52,717
Mazatzal	Tonto	Phoenix	205,137
Mount Baldy	Apache	Springerville	7,106
Pine Mountain	Prescott	Prescott	16,399
	Tonto	Phoenix	
Sierra Ancha	Tonto	Phoenix	20,850
Superstition	Tonto	Phoenix	124,117
Sycamore Canyon	Coconino	Flagstaff	49,575
	Kaibab	Williams	
	Prescott	Prescott	
CALIFORNIA			
Agua Tibia	Cleveland	San Diego	25,995
Caribou	Lassen	Susanville	19,080
Cucamonga	San Bernardino	San Bernardino	9,022
Desolation Valley	Eldorado	Placerville	41,343
Dome Land	Sequoia	Porterville	62,121
Emigrant Basin	Stanislaus	Sonora	97,020
High Sierra	Sierra	Fresno	10,247
	Sequoia	Porterville	
Hoover	Toiyabe	Reno, Nev.	42,779
	Inyo	Bishop, Calif.	
John Muir	Sierra	Fresno	503,258
	Inyo	Bishop	
Marble Mountain	Klamath	Yreka	213,363
Minarets	Inyo	Bishop	109,484
	Sierra	Fresno	
Mokelumne	Eldorado	Placerville	50,400
	Stanislaus	Sonora	

WILDERNESSES AND PRIMITIVE AREAS IN THE NATIONAL FORESTS—Continued

State	National Forest	Headquarters	Total Acreage
CALIFORNIA—Continued			
Salmon Trinity Alps	Klamath	Yreka	223,340
	Shasta-Trinity	Redding	
San Gabriel	Angeles	Pasadena	36,137
San Geronimo	San Bernardino	San Bernardino	34,644
San Jacinto	San Bernardino	San Bernardino	20,564
San Rafael	Los Padres	Santa Barbara	142,722
South Warner	Modoc	Alturas	68,507
Thousand Lakes	Lassen	Susanville	15,695
Ventana	Los Padres	Santa Barbara	52,769
Yolla Bolly-Middle Eel	Mendocino	Willows	108,451
	Shasta-Trinity	Redding	
COLORADO			
Flat Tops	White River	Glenwood Springs	102,124
Gore Range-Eagle Nest	Arapaho	Golden	61,101
	White River	Glenwood Springs	
La Garita	Gunnison	Gunnison	48,486
	Rio Grande	Monte Vista	
Maroon Bells-Snowmass	White River	Glenwood Springs	71,060
Mt. Zirkel	Routt	Steamboat Springs	72,472
Rawah	Roosevelt	Fort Collins	26,674
San Juan	San Juan	Durango	238,407
Uncompahgre	Uncompahgre	Delta	53,252
Upper Rio Grande	Rio Grande	Monte Vista	56,600
West Elk	Gunnison	Gunnison	61,412
Wilson Mountains	San Juan	Durango	27,347
	Uncompahgre	Delta	
IDAHO			
Idaho	Boise	Boise	1,224,733
	Challis	Challis	

WILDERNESSES AND PRIMITIVE AREAS IN THE NATIONAL FORESTS—Continued

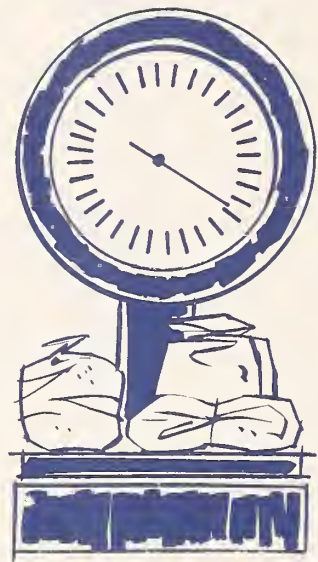
State	National Forest	Headquarters	Total Acreage
IDAHO—Continued			
Idaho—Continued	Salmon	Salmon	
	Payette	McCall	
Sawtooth	Boise	Boise	200,942
	Challis	Challis	
	Sawtooth	Twin Falls	
Salmon River Breaks	Nezperce	Grangeville	216,870
	Bitterroot	Hamilton, Mont.	
Selway-Bitterroot (see also Montana)	Clearwater	Orofino	988,655
	Nezperce	Grangeville	
	Bitterroot	Hamilton, Mont.	
MINNESOTA			
Boundary Waters Canoe Area	Superior	Duluth	747,128
MONTANA			
Absaroka	Gallatin	Bozeman	64,000
Anaconda-Pintlar	Beaverhead	Dillon	157,803
	Bitterroot	Hamilton	
	Deerlodge	Butte	
Beartooth	Gallatin	Bozeman	230,000
	Custer	Billings	
Bob Marshall	Flathead	Kalispell	950,000
	Lewis & Clark	Great Falls	
Cabinet Mountains	Kootenai	Libby	94,272
	Kaniksu	Sandpoint, Idaho	
Gates of the Mountains	Helena	Helena	28,562
Mission Mountains	Flathead	Kalispell	73,340
Selway-Bitterroot (see also Idaho)	Bitterroot	Hamilton	251,930
	Lolo	Missoula, Mont.	
Spanish Peaks	Gallatin	Bozeman	49,857

WILDERNESSES AND PRIMITIVE AREAS IN THE NATIONAL FORESTS—Continued

<i>State</i>	<i>National Forest</i>	<i>Headquarters</i>	<i>Total Acreage</i>
NEVADA			
Jarvis	Humboldt	Elko	64,667
NEW HAMPSHIRE			
Great Gulf	White Mountain	Laconia	5,552
NEW MEXICO			
Black Range	Gila	Silver City	169,356
Blue Range (see also Arizona)	Apache	Springerville, Ariz.	36,598
Gila Wilderness	Gila	Silver City	433,690
Gila Primitive Area	Gila	Silver City	130,637
Pecos	Santa Fe	Santa Fe	167,416
	Carson	Taos	
San Pedro Parks	Santa Fe	Santa Fe	41,132
Wheeler Peak	Carson	Taos	6,027
White Mountain	Lincoln	Alamogordo	31,171
NORTH CAROLINA			
Linville Gorge	Pisgah	Asheville	7,575
Shining Rock	Pisgah	Asheville	13,350
OREGON			
Diamond Peak	Deschutes	Bend	35,440
	Willamette	Eugene	
Eagle Cap	Wallowa-Whitman	Baker	220,416
Gearhart Mountain	Fremont	Lakeview	18,709
Kalmiopsis	Siskiyou	Grants Pass	76,900
Mt. Hood	Mt. Hood	Portland	14,160
Mt. Jefferson	Deschutes	Bend	99,600
	Mt. Hood	Portland	
	Willamette	Eugene	

WILDERNESSES AND PRIMITIVE AREAS IN THE NATIONAL FORESTS—Continued

<i>State</i>	<i>National Forest</i>	<i>Headquarters</i>	<i>Total Acreage</i>
OREGON—Continued			
Mount Washington	Deschutes Willamette	Bend Eugene	46,655
Mountain Lakes	Winema	Klamath Falls	23,071
Strawberry Mountain	Malheur	John Day	33,003
Three Sisters	Deschutes Willamette	Bend Eugene	196,708
UTAH			
High Uintas	Ashley Wasatch	Vernal Salt Lake City	237,177
WASHINGTON			
Glacier Peak	Mt. Baker Wenatchee	Bellingham Wenatchee	464,219
Goat Rocks	Gifford Pinchot Snoqualmie	Vancouver Seattle	82,680
Mount Adams	Gifford Pinchot	Vancouver	42,411
Pasayten	Okanogan Mt. Baker	Okanogan Bellingham	518,000
WYOMING			
Bridger	Bridger	Kemmerer	383,300
Cloud Peak	Bighorn	Sheridan	137,000
Glacier	Shoshone	Cody	177,000
North Absaroka	Shoshone	Cody	351,104
Popo Agie	Shoshone	Cody	70,000
South Absaroka	Shoshone	Cody	483,130
Stratified	Shoshone	Cody	203,930
Teton	Teton	Jackson	563,500



TRAVEL LIGHT

Experienced backpackers pride themselves on being able to travel light. With many, weight saving is almost a fetish; with all it's a game. Rugged, sure-footed men will seriously explain that they cut towels



in half and saw the handles off toothbrushes to save ounces. They measure out just the right amount of food needed and put it in plastic bags, which are lighter than cardboard. They carry scouring pads with built-in soap, thus eliminating a bar of soap and a dishcloth. There are dozens of such tricks to save the ounces that add up to pounds.

How much should one carry? In the Rupe family Jack, the father, started with 51 pounds, 5 of which were fishing gear. Harriet, the mother, started with 38 pounds. "After I fell in the creek," she says, "Jack added part of my gear to his already overloaded pack."

Seventeen-year-old Jackie also carried 38 pounds, while her younger sister Barbara, 11, took 26 pounds. Bret, 15, carried 48 pounds. Nine-year-old Wade had no trouble with his 26 pounds.

Most people try to get by with lower weights: 30 pounds for a woman (maximum 35), and 40 pounds for an adult male (50 pound limit). Actually, it all depends upon the physical condition and experience of the individual, the terrain to be covered, the length of the trip, and the time of year.

When figuring weight, count all items—the cup on the belt, the camera and light meter around the neck. Most backpackers keep such appendages to a minimum. They are easily lost, and since they may catch on low brush, can be a safety hazard.



WHAT DO I NEED?

Pack • Tent or tarp for a roof overhead
 • Sleeping bag • Air mattress • Cooking utensils • Dishes—plates, cups, and cutlery • Food: 1½ pounds per person per day • Clothing: slacks or jeans—2 pair, long-sleeved cotton shirt—at least 2, wool shirt or sweater, parka or wind-breaker, wool socks—2 changes, underwear, camp shoes and socks, rain gear (rain shirt, poncho, or plastic raincoat), handkerchiefs • Flashlight with extra batteries and bulb • First aid kit—make your own: band-aids, compresses, 4-inch Ace bandage, triangular bandage, antiseptic, aspirin, eye wash, adhesive tape • Bug dope • Maps and map case • Suntan lotion • Dark glasses • Rope (nylon cord) • Toilet tissue • Trowel • Knife • Ax or hatchet • Small pliers • Matches • Soap and towel • Needle and thread • Safety pins.

Don't rush out and buy all these. Most people have something they can "make do."

F-503160

The Rupes check weights on bathroom scales which they leave in the car. First they weigh in without pack; then with pack. Here Dad is taking some of the gear from pack overloaded by young son, Wade.

A GOOD UNDERPINNING

There is probably nothing about which experienced backpackers are more definite than boots. Ask 15 hiking friends what kind of boot to get, and there will be 15 different answers.

"Use heavy sneakers well padded with wool socks."

"No support in those, get an ankle-high boot with moccasin top stitching."

"That height is wrong, use 7-inch boots—protection against snakes!"

"What's the matter with boots that come halfway up the calf of the leg?"

"Too stiff. Try the shoepac rubber-bottomed boot with leather top for wading through low streams."

"They're too hot and sweaty in summer and too cold in winter. Get boots made to order."

"That's a waste of money."

And so the discussion goes on endlessly. All the types of boots have advantages and disadvantages.

Sneakers are cooler and definitely cheaper. For young people with growing feet, the heavy-soled ankle-high sneaker is probably best. Most youngsters find them comfortable and the family budget permits a new pair each year.

Rubber is obviously good where the going is wet. Many a hiker traversing bog country uses the shoepac exclusively. Leather is generally the most popular material for all-around hiking shoes. It wears well, is soft and pliable. It can be waterproofed to shed rain and snow.

Leather soles on boots, however, are slippery. Staunch oldsters still use them with hobnails, but rec-



reation hikers use rubber, synthetic, or cord soles. When the original sole begins to wear, thick rubber lug soles can be put on, which grab on rocks. Many hikers have lug soles applied at time of purchase.

At first, some men use work shoes that they already have around the house, or the boots obtained in military service. Many women use saddle shoes or other sturdy flat-heeled oxfords with rubber soles.

This year for the first time all the Rupes had 7-inch boots. In the past only the parents had boots; the children used sneakers.

Summing up—boots should fit comfortably over two pairs of socks, one thin and one thick. They should protect the ankles, support the foot, and withstand long mileage on rocks and roots. They should be broken in before the trip—but don't start out with a pair too well worn. Mountain trails are tougher than city park paths.

Words of caution: ski boots are for skiing, and cowboy boots are for horseback riding. Footwear with eyelets and lacing have proved best for hiking, and don't forget that extra pair of laces.

AN EASY-RIDING PACK FOR A MERRY HEART AND A LIGHT STEP

There are three major types of packs used today: the packboard, the frame, and the rucksack. Each of the Rupes now uses the modern version of the packboard—a lightweight aluminum packframe, angled at the shoulder and waist to fit the contours of the body with only nylon bands resting against the back. These come in sizes to fit different weights and heights. Straps from the lower part of the frame fasten just below the waist, placing the weight of the pack on the hips. If the waist strap is released, the frame will hug the back, so that the pack will not swing a person off balance when he is jumping from rock to rock or hiking along narrow ledges.

The frame may be bought with or without a pack attached. The Rupes preferred the former, with compartments and outside pockets. They report that at no time does the pack attached to the frame touch the body.

These deluxe packs are one of the latest backpacking investments. Even now, those used by the two younger children are reproductions made by Jack. When they first started this sport they used wooden packboards and an old Army frame pack. The wooden packboard is a rigid and sturdy contraption with shoulder straps and a waistband, but no contours. The load that can be put on them is tremendous. At best they are uncomfortable.

The Army framepacks were developed during World War II and are still available at low cost. Also

there are commercial variations, lighter in weight and more comfortable.

Hints:

—Outside pockets are mighty handy for items needed during the day.

—Attach foam rubber pads to the shoulder straps. They come ready made from almost any sporting goods store.

—Place heavy items toward the back of the pack.

A ROOF OVERHEAD

To take a tent or not to—that is the backpacker's question. A bed beneath the stars has romantic appeal, but in most parts of the country, it's best to be practical and carry some kind of shelter. There's nothing more uncomfortable than waking up to rain or snow in the face and a soggy sleeping bag.

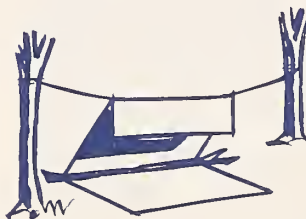
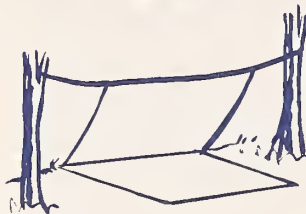
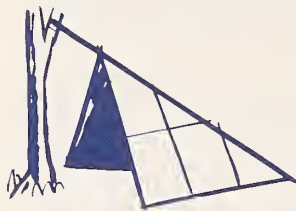
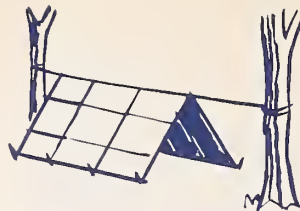


The Rupes carried tubular plastic material, similar to that used by dry cleaners, except that it is wider and thicker. For it they paid less than 75 cents a yard, and their tents were about 4 yards long to accommodate two. The plastic weighs little and folds up into a small package. Putting a poncho under it for a ground cloth is advisable: it is easily punctured.

There are lightweight tents designed for backpacking that have the advantage of more protection. With a floor and a netting over the entrance they are insect proof, animal proof, and waterproof. Stakes slightly larger than a nail and lightweight telescopic aluminum poles rolled in the tent make a compact package.

Tent material presents a problem. Breath condenses in the watertight nylon tent causing real dampness. Waterproofed cotton, on the other hand, isn't completely watertight. Many backpackers get around this by using a cloth tent and stretching a nylon or plastic fly over it.

The shelter need not be a tent. A nylon ground cloth or a large piece of plastic at least 9 x 12 feet, preferably with grommets along the sides, can be tied up to trees to give shelter. Some people use their ponchos for this purpose.



There are numerous ways to fix such shelters. String a rope from one tree to another, head high or less. Throw the plastic over the rope and attach corners to other trees, one end lower than the other. Under this shelter meals can be prepared in case of rain and three or four people can sleep. For small shelter omit the ridge rope and attach the tarp to trees so that it slants.

For a one-man shelter, put part of the ground cloth on the ground as a protection for the air mattress. Then run the ground cloth on a slant over the air mattress and hitch to overhanging branches, thus forming a "V" in which to sleep. If the open end of the "V" is up against a big log, the backpacker has a snug little nest in which to crawl for the night.

SANITATION

Jackie and Barbara put up their shelter. The Rupes insert sleeping bags into the tubing and place stones at the corners to make the floor. Then they run a rope through the tubing and attach it to two trees or poles lashed together for the purpose, as shown. This simple procedure creates the usual triangular shape of a tent.

In National Forest wilderness, the evidence of Man must always be “substantially unnoticeable.” You will find no trash containers and, except in rare cases, there will be *no toilets*. So sanitation is your personal responsibility. Be sure to—

—Carry out in your pack all used cans, bottles, aluminum foil, and anything else that will not burn. (Empty cans are easier to carry if they are flattened.) *Burying such trash is not satisfactory*, because it will eventually come to the surface through animal or frost action.

—Burn in your campfire all paper and other burnable material.

—Bury soft food scraps such as coffeegrounds or fruit and vegetable peelings, so they will decompose rapidly.

The proper disposal of human waste is most important, but, because we have grown to expect a toilet always handy, this can often be a perplexing problem. Yet, for the benefit of those who come after us, we must leave no such evidence that we were there, and we must not contaminate the waters.

Fortunately, Nature has provided in the top 6–8 inches of soil a system of very efficient biological “disposers” to decompose fallen leaves, branches, dead animal bodies, animal droppings, etc. If every hiker cooperates, there will be no wilderness sanitation problems. The individual “cat method,” used by most experienced backpackers, is recommended.

—Always carry a light digging tool, such as an aluminum garden trowel (page 13).

—Select a screened spot at least 50 feet from the nearest water.

—Dig a hole 5–6 inches deep and 8–10 inches across. Try to remove the sod (if any) in one piece.

—After the deposit is made, cover it tightly with the loose soil first and then with the sod.

—Nature will do the rest in a few days.



MAKING CAMP

"Backpacking is a special kind of camping," says experienced woodsman Walt Powell who helped the Rupes get started. "You can make your camp in a fresh clean site away from a dusty trail, and you are not disturbed or awakened by other campers, for there are none nearby. You fish in almost untouched waters. It is the simplest, most flexible, and least expensive way of penetrating and enjoying the interior regions of the mountain areas."

These are words to lure city folk from their concrete canyons or cliff dwelling apartments into the wilderness. To sleep where the earth meets the sky until awakened by the sun is to know the true freedom of backpacking.

But use care in picking the campsite. An almost imperceptible ravine may become a waterway in case of rain. The murmuring stream that lulls a person to sleep is a chilly neighbor at night.

In picking a campsite, look for drinking water, fuelwood, level ground, warmth, and shelter. For full enjoyment hold out for a view, when possible. Pitch the tent where it gets morning sun, so it can dry out standing before it is packed. Note the wind direction in deciding which way to face. The wind will blow from a lake onto the shore and down a canyon at night; in reverse during the day.

In the High Sierra summer rain is rare and tents are not necessary. One of the nicest spots for the sleeping bag and air mattress in such country is a rocky ledge which will hold the heat of the afternoon sun far into the night and gives protection from wind. An overhanging branch will provide a natural roof with clothes hooks. Avoid, however, camping under dead branches, near leaning trees, or in the path of rock slides.

In the wilderness most water will be pure enough to drink. When in doubt, boil it. Or take along some purification tablets. If the family is large, decide which part of the stream is for drinking. Wash clothes and body downstream.



HEAT AND LIGHT

Into the well-equipped pack must go a flashlight, spare battery cells, and an extra bulb. It is all the light needed because one advantage of backpacking is that the travelers can always make camp before darkness overtakes them. In packing the flashlight, however, reverse the cells so they will not burn out if the switch is accidentally snapped on.

The campfire is a warm and cheering part of the backpacking trip. It provides a chance for the family to get close together to relive the adventures of the day, sing the old songs or learn new ones, and read. The Rupes found singing great fun. Jack also read short stories aloud. For family reading, a history of the country or the experiences of another who has explored the same vicinity might be interesting.

Around the campfire, too, many backpackers brew a cup of tea made from herbs found along the trail. A person must know plants well for this. A more conventional family will prefer tea, bouillon, readymade cocoa, or marshmallows.

The camper is permitted to use for fuel standing dead trees and fallen branches or trees. In National Forest Wildernesses such fuel is usually plentiful and the backpacker counts on it for cooking. In some

sections of the country, however, like the Southern Appalachians, the backpacker is advised to carry a lightweight, one-burner gasoline stove. For chopping wood take an ax with at least a 2½- to 3-pound head and a 28- to 30-inch handle.

When building a fire, clear the ground of grass, leaves, and other flammable material. Circle the burning area with rocks, leaving cleared space outside the rocks. Keep water near in case the flames spread, especially if the ground is very dry. Most experienced campers keep their cooking fires small—concentrating the heat and at the same time saving wood.

When breaking camp, be sure the fire is dead out. Dump water on the ashes; stir them in with the soil. Roll away stones from fireplaces, following the old adage, "Where I go, I leave no sign."

A Word to the Wise

—Take along a bit of candle or heat tabs to light the fire in case the wood is damp and does not catch quickly with a match.

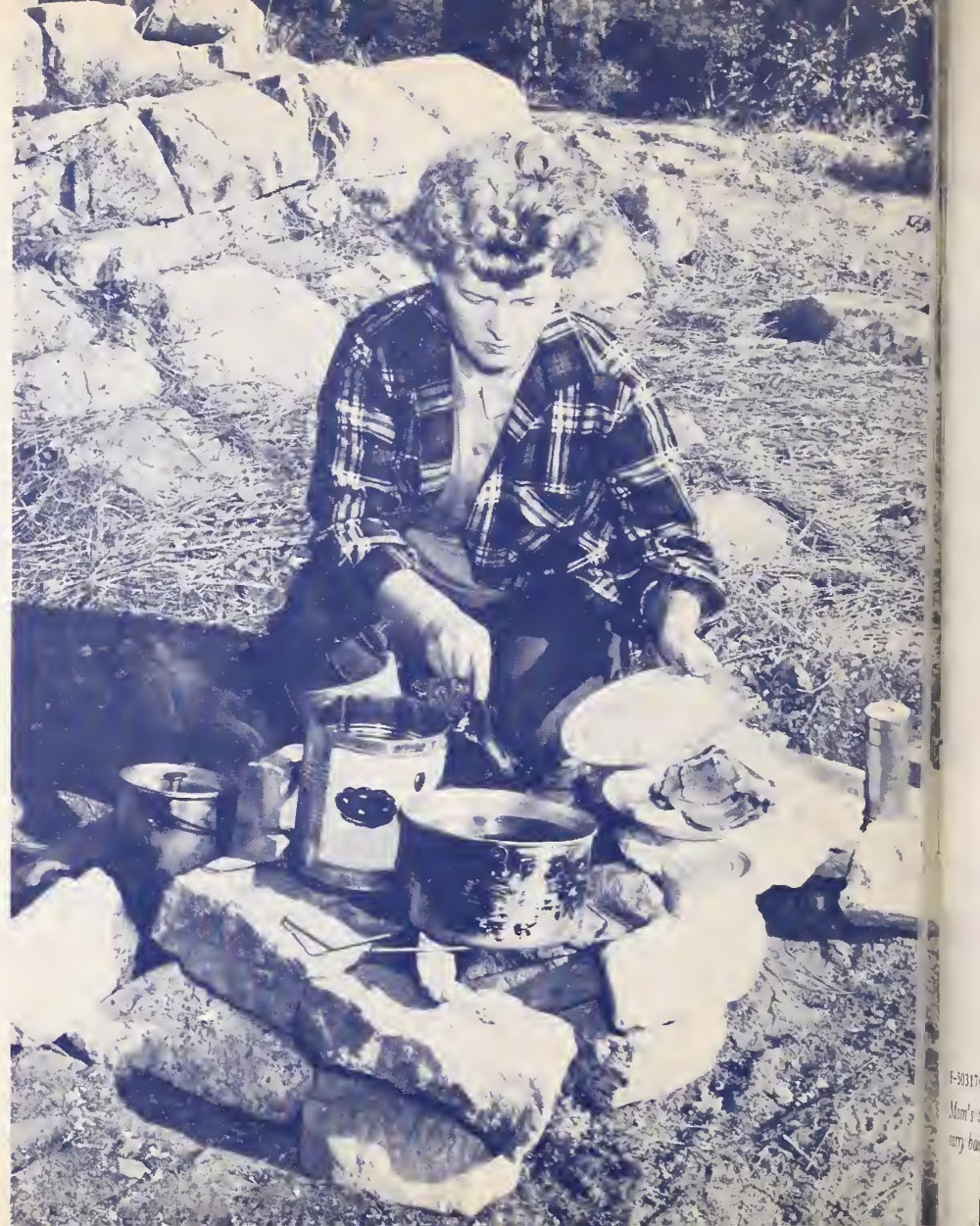
—Put matches in a waterproof container or waterproof matches with paraffin.

—Be sure to check with the Forest Ranger to see if a campfire permit is necessary. In those areas where fire danger is great, camp only at designated sites.



WHAT'S COOKING?

Keep the cooking equipment and food simple in planning for the backpacking trip. Most families use a nesting set of pots with covers, frying pans, coffee-pot, cups, and plates. This they supplement with a pan or two or a waterbag. The Rupes used a Number



10 can (about 3 quarts) obtained from a restaurant. There are many types of waterbags. The lightest is probably the plastic version of the goatskin which will hang from a tree.

Dehydrated food has progressed a long way in the last few years, both in taste and variety. Regular groceries carry instant rice, instant potatoes, instant puddings, and appetizing dried soups such as potato-leek, mushroom, and tomato-beef. Some stores stock freeze dry foods such as shrimp supreme, turkey tetrazinni, and chicken stew; bacon and butter in cans, though most backpackers buy bacon by the slab and use a special container for butter.

Companies catering to campers have developed one-dish meals such as beef and spuds, chicken and rice, beef and macaroni. They are continually adding to their vegetable line, and now it is possible to get dehydrated green salad. They carry freeze dry breakfast combinations—bacon and eggs or ham and eggs with fried potatoes.

Don't forget coffee and tea for an eye opener and quick pickup. Instant cocoa tastes good in high country; and bouillon cubes not only make a good drink but a good flavoring for one-dish meals. Dried milk is almost a must. Bread is optional. Many carry a loaf, a can or Scandinavian flatbreads which are thin and light.

The Rupes spend less than \$1.20 per person per day for food.

SAMPLE MENUS

Breakfast

Orange juice
Oatmeal with
dates or
raisins
Coffee or cocoa

Lunch

Cold meat—
1 slice per
person
Cheese slice
Mix of nuts,
raisins,
chocolate
chips
Powdered
lemonade

Dinner

Vegetable soup
Macaroni with
cheese, dried
beef, bacon
fat
Chocolate
pudding

Other possibilities:

Stewed fruit
Bacon and eggs
(dried)
Hemo and milk
or coffee

Hard salami
Nuts, sweetened
cooking
chocolate
Powdered
boysenberry
beverage

Chicken noodle
soup
Beef & spuds
(dehydrated
prepared mix)
Bread
Butterscotch
pudding
Hot tea

<i>Breakfast</i>	<i>Lunch</i>	<i>Dinner</i>
Fruit juice	Cheese	Chili and beans
Hash—canned or dried	Apricots	Fruit salad— dried or canned
Coffee or cocoa	Powdered grape beverage	Tea
Fruit	Cheese	Onion soup
Pancakes	Raisins	Mashed potato
Bacon	Mixed nuts	Fresh fish
Coffee	Powdered orange beverage	Fruit, tea

Note: Many backpackers supplement their diet with a vitamin pill each day.

Estimates on the amount of food needed vary from 1½ to 2½ pounds per person, per day. Much depends on the type of food carried and the appetite of the individual. It is an established fact that the appetite increases after the first few days.

Ounces per serving of some typical foods follow:

<i>Food</i>	<i>Ounces</i>
Dried fruit—for Breakfast	2
for Lunch	1
Cereal	1.75 (¼ cup)

<i>Food</i>	<i>Ounces</i>
Powdered egg	1 (4 tbsp.)
Cheese	1
Hemo powder75 (2 tbsp.)
Nuts	1
Bacon	2 (2 slices)

For your own Beef Stew:

Potato cubes	1.6 (½ cup)
Onion flakes25 (⅛ cup)
Carrot flakes5 (⅛ cup)
Cured beef	2
Cheese	1
Bacon fat	

For your own Macaroni-Beef Dish:

Macaroni	2 (½ cup)
Cheese	1
Cured beef	2
Bacon fat	

For other foods use estimates on package.

Suggestions

—Some special dehydrated mixes are packaged for four, six, or eight servings. Generally they are ample.

—Sturdy plastic bags of various sizes simplify carrying food. Large ones around cooking equipment will protect the other contents of the pack from fire-blackened pots.

F-503171

Wade makes instant pudding under the watchful eye of Barbara, who is waiting for a chance to test the mixture.



AND SO TO SLEEP

There comes a time in the life of every camping adult when an air mattress is essential to a good night's sleep. (Youths can adjust their bones to the hard earth and awake refreshed.) Remember that in wilderness you must not cut boughs off trees for your bed.

Fortunately the equipment companies have come out with light and durable air mattresses for backpacking and most backpackers use them. They come in different lengths, again saving ounces. A mattress from the shoulders to just below the hips is all that is necessary for comfort. It is a good idea to put some gear under the the feet and legs for warmth.

Mattresses are made of plastic, nylon, or rubber. Prime consideration in selecting one is weight and durability. Most people blow up their air mattresses too much. A good test is to sit on the mattress. You should feel the ground but only slightly. Deflating the mattress is simple—before rising, take out the plug or valve and let your body weight help push out the air.

Backpackers usually carry sleeping bags, and a favorite indoor sport on a long winter night is to compare the relative merits of the many types on the market.

Weight, warmth, bulk, waterproofness, and cost are important factors to evaluate in selecting a sleeping

bag. Consider the materials used for both the outer lining and for the insulation. Discuss your needs with the shopkeeper and ask him to show you a wide variety of bags.

Decide how much warmth is needed and buy accordingly. Look for stitching and shape in a bag. Stitching is needed to prevent bunching of the filling, but should not go clear through the outer and inner cloth of the bag. It should be alternated, thus—



Mummy bags that taper at the foot are popular, but consider foot room. Bags with zipper all down one side and across the foot are easier to get into and out of, and in them warmth can be regulated by unzipping a little or a lot. These bags are usually rectangular in shape and can be spread out like a comforter. Some people make their own bags with comforters and long zippers.

Mummy bags come with a built-in hood for warmth. Others have a flap that comes up over the head, providing shelter against rain and drafts. Head protection is particularly necessary if no tent is used. Drafts around the head and neck can be cold, even on a mild night, and if one part of the body is chilled, a person becomes cold all over.

A word of caution about sleeping bags: air them after use.

GUIDEPOSTS

The foregoing pages have been only a guide—a path designed to lead newcomers into the joys and wonders of backpacking. From it one can explore new trails in food, sleeping bags, or cooking equipment. Just as the pioneers worked out their methods of survival, the backpacker traveling in primitive lands will work out his techniques.

But before going, just a word about

—*Clothes.*—Take enough to keep warm. Veterans recommend several lightweight layers of wool rather than one heavy layer, for comfort at different temperatures. See checklist on page 15 for items needed.

—*Fishing.*—Get a State License. In most States short-term licenses are available at reasonable rates.

—*Hiking.*—A steady pace, comfortable for the slowest member of the family; an easy stride, short rests standing—these are the secrets of good hiking.

—*Getting lost.*—Don't worry about this; most backpackers stay on the trail. But as a precaution, study a map of the area before venturing into it. Experienced backpackers frequently pinpoint on the map their positions on the ground at rest stops and locate various peaks. Some backpackers even have practiced using maps on strange trails before starting the first trip. Others have tried to follow a straight line for a short distance through trailless country, using compass and map.

The main thing to remember when the trail seems to disappear is "Don't panic." Stop, think, look. Pull out the map and get oriented by stream drainages or visible mountain peaks. Backtrack if neces-



sary, following broken twigs, bent grass, or overturned stones left en route until oriented.

If this doesn't work, build a fire and keep it going. If the weather is good and a Forest Service lookout is on duty, he will send someone to investigate. Use green boughs to make a dense smoke and little flame. Keep the fire small.

—*Distress signals.*—Three smokes, three blasts on the whistle, three shouts, three flashes of light, three of anything that will attract attention. In case of



injury, administer first aid; and if the injury is serious signal for help. Generally it is not advisable to split the group, but if it becomes necessary to go for help, be sure to leave someone with the victim.

—*First aid kits.*—Carry any special items you personally might need in addition to those listed on page 15. Be prepared for all the usual emergencies such as burns, abrasions, sprains, headaches.

—*Sun.*—High elevations are a sunburn hazard to refugees fresh from concrete canyons of the cities. Be prepared with a personally tested suntan lotion or take a cream like zinc oxide which the sun's rays cannot penetrate. Most hikers in high country need dark glasses. Camera fans should take care of over-exposing film at high elevations, especially where there are snowbanks.

—*Garbage.*—Please burn. Also burn and flatten tin cans. Carry out cans, bottles, aluminum foil, and anything else that will not burn.

—*Lightning.*—In case of lightning storm, get off exposed peaks or ridges and avoid lone tall trees. Stay far from any natural "lightning rods," and don't make one of yourself. If it is impossible to get into the protection of brush or trees, sit down and wait for the storm to pass.

—*Leaving word.*—It's a good idea to let the Forest Ranger or game warden know your general plans in case of emergencies.

And a happy backpacking trip to you—from the Secretary of Agriculture, from the Chief of the Forest Service, and from the Rupe family.

INSTANT REFERENCE

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The Forest Service, U.S. Department of Agriculture, is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.

For specific information about a proposed trip, write to the Supervisor of the National Forest in which the Wildernesses (listed on pp. 7-11) are lo-

cated. Three Forest Service booklets of general interest to backpackers are CAMPING, THE APPALACHIAN TRAIL, and NATIONAL FOREST WILDERNESSES.

Local hiking clubs can give tips on trips into wildernesses and other back-country areas. Many of the larger clubs publish maps, guides, and how-to-do-it books which are found in the library with other camping books.

Among groups publishing useful information for backpacking are:

<i>Club</i>	<i>Area</i>
Adirondack Mountain Club..... Gabriels, N.Y.	New York State
Appalachian Mountain Club..... 5 Joy St., Boston, Mass.	New England, particularly New Hampshire and Maine
Appalachian Trail Conference..... 1718 N Street NW. Washington, D.C. 20036	Appalachian Trail from Maine to Georgia (has list of East- ern Clubs)
Green Mountain Club..... 108 Merchants Row, Rutland, Vt.	Vermont
Mazamas..... 909 N.W. 19th Ave., Portland, Oreg.	The Pacific Northwest
The Sierra Club..... Mills Tower Bldg., San Francisco, Calif.	The Sierra
Federation of Western Outdoor Clubs..... 201 S. Ashdale St., West Covina, Calif.	Can give addresses of 36 mem- ber clubs
Wilderness Society..... 729 15th St. NW., Washington, D.C. 20005	Wilderness throughout the United States

Don't overlook State agencies for Recreation, or Planning and Development, as a source of information.

What Is Wilderness

The Wilderness Act of September 3, 1964, established a national policy to secure for present and future generations of Americans the benefits of wilderness. "Wilderness" means different things to different people. That act defines wilderness as Federal land . . . " . . . where the earth and its community of life are untrammelled (unrestricted) by Man . . . retaining its primeval character and influence without permanent improvements or human habitation . . . affected primarily by the forces of nature, with the imprint of Man's work substantially unnoticeable. . . ." Wilderness shaped our national character as our forefathers met and conquered it. The National Wilderness System will assure all Americans of the continuing opportunity to test their pioneering skills unaided by manmade facilities. Also Leopold once expressed the wilderness philosophy this way:

"No servant brought them meals. . . . No traffic cop whistled them off the hidden rock in the next

rapids. No friendly roof kept them dry when they mis-guessed whether or not to pitch the tent. No guide showed them which camping spots offered a night-long breeze, and which a night-long misery of mosquitoes; which firewood made clean coals, and which only smoke. The elemental simplicities of wilderness travel were thrills . . . because they represented complete freedom to make mistakes. The wilderness gave . . . those rewards and penalties for wise and foolish acts . . . against which civilization has built a thousand buffers."

Accordingly, when you enter a wilderness you should expect: No piped water, no prepared shelters, usually no toilets, no table to eat your meals from, and no grill to hold your cooking utensils. There will be few trail signs to guide you, so you must know how to follow a map. You will be on your own to a great degree—be prepared to meet the unexpected.

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